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EXAMINER

WALLENHORST, MAUREEN

ART UNIT PAPER NUMBER

1743

DATE MAILED: 11/26/2003

3

Please find below and/or attached an Office communication concerning this application or proceeding.

2103

Office Action Summary

Application No.

10/068,516

Applicant(s)

MEHTA ET AL.

Examiner

Maureen M. Wallenhorst

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-46 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 250 words. It is important that the abstract not exceed 250 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because of the inclusion of legal phraseology such as "comprise". Correction is required. See MPEP § 608.01(b).

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claims 1-2, 5, 9, 23-25, 28, 32 and 46 are rejected under 35 U.S.C. 102(e) as being anticipated by Longdon et al.

Longdon et al teach of a plastic film used in the identification of goods. The plastic film contains a dyestuff therein, which is capable of undergoing a clearly visible color change when contacted with a color-developing material. The plastic film can be used to test the authenticity of a packaged good by applying a color-developing material to the plastic film, and observing any colored mark which appears on the package. According to page 5 of the instant specification, a "security paper" is defined as either a paper substrate or a plastic substrate, and therefore, the plastic film taught by Longdon et al qualifies as a "security paper". The dyestuff incorporated into the plastic film is preferably a latent dyestuff such as an acid/base indicator which is colorless and invisible to the eye under ambient pH conditions, but which forms a clearly visible color when contacted with a color-developing chemical such as an acid or base. Longdon et al teach that phenolphthalein can be used as the dyestuff since it is colorless at neutral pH but forms a vivid pink color when marked with a base. In addition, thymolphthalein can also be used. Longdon et al teach that the color development system is preferably reversible so that after the color is observed, the plastic film can go back to being colorless. It would be inherent that the color change on the plastic film taught by Longdon et al would disappear after drying the base material applied thereto since evaporation of the base material allows the hydrogen ion concentration to return to its original level whereby it becomes colorless again. The color-developing chemical used to test for authenticity of the plastic film is preferably held in a pen for easy use. See lines 55-67 in column 2 and lines 1-10 in column 3 of Longdon et al.

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6. Claims 1, 5, 9, 11, 23-24, 28, 32, 34 and 46 are rejected under 35 U.S.C. 102(b) as being anticipated by Detwiler, II et al (submitted in the Information Disclosure Statement filed on May 13, 2002).

Detwiler II et al teach of a method for verifying the authenticity of a paper sales record such as a sales receipt. Since page 5 of the instant specification defines a "security paper" as either a paper substrate or a plastic substrate, the paper sales record taught by Detwiler II et al qualifies as a "security paper". The method taught by Detwiler II et al comprises the steps of printing an ink onto a paper sales record, wherein the ink contains therein a coloring agent causing the ink to have a first color and being color-sensitive to a reagent having a basic pH, and verifying the authenticity of the sales record by applying thereto a basic reagent having a pH basic enough to cause the coloring agent to change color, thereby causing the print on the sales record to change from its original color to a second, visible distinct color. Detwiler II et al teach that a felt marker or pen can be used to apply the basic reagent to the sales record. Detwiler II et al teach that the preferred types of reactions for causing a color change are changes of pH to a more acidic or basic environment. In example 2 in column 5 of Detwiler II et al, the coloring agent in the ink printed on the sales record is phenolphthalein that turns bright red when contacted with a basic reagent such as sodium hydroxide. It would be inherent that the color change on the paper sales record taught by Detwiler II et al would disappear after drying the basic material applied thereto since evaporation of the basic material allows the hydrogen ion concentration to return to its original level whereby it becomes colorless again.

7. Claims 1-2, 5, 9, 24-25, 28 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Simons.

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Simons teaches of a moisture sensitive paper substrate, which is coated with a substance that is adapted to form a color change upon being raised from one pH value to a higher value. Since page 5 of the instant specification defines a "security paper" as either a paper substrate or a plastic substrate, the moisture sensitive paper taught by Simons qualifies as a "security paper". The substance coated on the paper is preferably phenolphthalein, which is colorless at an original pH level of the paper. If the pH of the paper is raised by the application of alkaline moisture, the coating turns a pronounced pink color. Simons teaches that during drying of the paper, the pH of the paper is lowered once again to such an extent that the phenolphthalein goes back to being colorless. Simons teaches that an alkaline earth hydroxide can be use as the alkaline, basic substance applied to the test paper. See lines 25-73 in column 7 and lines 9-27 in column 8 of Simons.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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10. Claims 1-6, 9-12, 23-29, 32-34, 36 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood in view of either Detwiler II et al or Longdon et al. For a teaching of Detwiler II et al and Longdon et al, see previous paragraphs in this Office action.

Wood teaches of a method for checking the authenticity of security papers such as checks, lottery tickets, postal orders, financial documents etc. The method comprises the steps of incorporating a color changing substance into the paper, applying a color-changing reagent to the paper, and observing if any color changes take place on the paper. Wood teaches that the color changing substance can be printed onto the security paper along with the printed material on the paper (i.e. such as with the writing on checks), and the print applications of the color changing substance can be made in different designs or images. See lines 10-20 in column 3 and lines 13-20 in column 4 of Wood. Wood teaches that many known substances having the property of changing color when brought into contact with a reagent can be used in the security paper to check the authenticity thereof. However, Wood fails to teach that a pH indicator substance can be used as the color changing substance.

Based upon the combination of Wood with either Detwiler II et al or Longdon et al, it would have been obvious to one of ordinary skill in the art at the time of the instant invention to use a pH indicator substance which changes color when contacted with an acidic or basic reagent as the color changing substance in the security paper taught by Wood to authenticate the security paper since Wood teaches that any known color changing substance can be used to print onto the security paper, and both Detwiler II et al and Longdon et al teach that color changing pH indicators can be used to verify the authenticity of articles. It also would have been obvious to one of ordinary skill in the art to vary the concentration level of the pH indicators taught by

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Detwiler II et al and Longdon et al for use in the security paper authenticity method taught by Wood to the levels as recited in the instant claims since concentration is a result effective parameter that can be varied depending upon an intended use of the reagent or a desired result.

11. Claims 7-8 and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood in view of either Detwiler II et al or Longdon et al as applied to claims 1-6, 9-12, 23-29, 32-34, 36 and 46 above, and further in view of Kawashima (US Patent no. 5,196,243, submitted in the Information Disclosure Statement filed on May 13, 2002). For a teaching of Wood, Detwiler II et al and Longdon et al, see previous paragraphs in this Office action. Both the secondary references to Detwiler II et al and Longdon et al fail to teach that ammonia or one of the other bases recited in claims 7-8 and 30-31 can be used as the color-changing reagent applied to the paper or plastic substrate.

Kawashima ('243) teaches of a printed material such as paper, which is printed with a coloring ink that develops color after interaction with a coloring reagent. The coloring ink loses its color through volatilization or desiccation, and can redevelop color when treated with a coloring reagent a second time. The coloring ink is a pH indicator substance such as phenolphthalein, thymolphthalein, cresolphthalein, etc. Kawashima teaches that when the indicator on the printed paper is treated with a base such as ammonia and monoethyl amines mixed with water, a color develops on the paper due to the pH change. The use of these bases allows the developed color to fade with time as a result of the volatilization of the alkaline substance or the evaporation of the solvent (i.e. water). The coloring and fading can be repeated any number of times. See lines 22-50 in column 3 of Kawashima.

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Based upon the combination of Wood, either Detwiler II et al or Longdon et al and Kawashima, it would have been obvious to one of ordinary skill in the art to use ammonia or one of the other bases recited in claims 7-8 and 30-31 as the color-changing reagent applied to the security paper taught by Wood when the pH indicators taught by either Detwiler II et al or Longdon et al are printed thereon since Kawashima teaches that ammonia and monoethyl amines allow the color change of a pH indicator on a paper to fade over time through evaporation and volatilization so that the indicator can be reused.

12. Claims 13-19, 35 and 37-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood in view of either Detwiler II et al or Longdon et al as applied to claims 1-6, 9-12, 23-29, 32-34, 36 and 46 above, and further in view of Dotson et al.

For a teaching of Wood, Detwiler II et al and Longdon et al, see previous paragraphs in this Office action. Wood fails to teach that the color changing substance is printed on the security paper in conjunction with a toner receptive polymer.

Dotson et al teach of a security document such as a check, money order etc. that has a coating thereon which enhances the adhesion of toner particles and ink to the document. The coating also contains therein a color changing chromogen that changes color when someone attempts to tamper with the security document. The coating contains a toner receptive polymer such as a copolymer of acrylic acid and styrene. This polymer serves to enhance the adhesion of toner or ink to the document substrate so that toner or ink will not flake or peel from the document during normal handling. Dotson et al teach that the coating may be applied to the entire surface of the document substrate, may be spot-coated in only certain areas of the substrate, or may be coated on in an image.

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Based upon the combination of Wood, either Detwiler II et al or Longdon et al, and Dotson et al, it would have been obvious to one of ordinary skill in the art to print the color changing substance taught by Wood onto the security paper with a toner receptive polymer, such as the ones taught by Dotson et al, since Dotson et al teach that the toner receptive polymers serve to enhance the adhesion of toner or ink to a document substrate so that the toner or ink will not flake or peel from the document during normal handling.

13. Claims 20-22 and 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood in view of either Detwiler II et al or Longdon et al as applied to claims 1-6, 9-12, 23-29, 32-34, 36 and 46 above, and further in view of Mehta et al.

For a teaching of Wood, Detwiler II et al and Longdon et al, see previous paragraphs in this Office action. Wood fails to teach that the color changing substance is printed on the security paper in conjunction with a toner receptive component comprising a resin and an oil.

Mehta et al teach of an ink composition printed onto a security document such as a check that provides a reversible color change in response to heat. The ink composition contains an ink vehicle therein, which is a mixture of a phenolic modified resin and a compatible oil. The ink composition is printed onto the security document by letterpress printing. Mehta et al teach that the ink vehicle provides enhanced adhesion of toner particles to the substrate of the security document.

Based upon the combination of Wood, either Detwiler II et al or Longdon et al, and Mehta et al, it would have been obvious to one of ordinary skill in the art to print the color changing substance taught by Wood onto the security paper in conjunction with a toner receptive component comprising a resin and an oil since Mehta et al teach these toner receptive

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components in an ink composition serve to enhance the adhesion of toner particles to the substrate of a security document.

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Please make note of: Godet et al, Jotcham et al, Cregg, Lakes et al, Krueger et al, Ramsey et al, Honnorat et al, FR 2365656, GB 2,321,471, FR 2539533, FR 2410702, GB 1,507,454 and GB 2,052,587 who all teach of different types of security papers and methods of authenticating them.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maureen M. Wallenhorst whose telephone number is 703-308-3912. The examiner can normally be reached on Monday-Wednesday from 6:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden, can be reached on 703-308-3912. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Maureen M. Wallenhorst
Primary Examiner
Art Unit 1743

mmw

November 23, 2003

Maureen M. Wallenhorst
MAUREEN M. WALLENHORST
PRIMARY EXAMINER
GROUP 1700